Original Article

Prevalence and Profile of Bullying Involvement among Students of Rural Schools of Anand, Gujarat, India

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ABSTRACT

Background: Bullying can have short- and long-term implications on physical as well as mental health. The objective of this study was to assess the prevalence of bullying involvement (bully, victim, and bully–victim) and know profiles of bullying among students of rural schools of Anand, Gujarat, in Western India. **Materials and Methodology:** A questionnaire in the Gujarati language was administered to sixth to tenth graders of 12 rural schools (n = 2552) in the Anand district. The questionnaire included four questions each to screen for bullying behavior and victim experiences; Peer Interaction in Primary Schools Questionnaire (PIPSQ, a self-reported measure of individuals' levels of bullying behaviors and victimization experiences), and Strength and Difficulties Questionnaire (SDQ, to assess emotional, behavior, and interpersonal difficulties experienced), apart from demographic information. The analysis of variance (ANOVA)/Chi-square test was applied to determine associations. **Results:** Prevalence of bullying involvement was 70% (n = 1529; 9.1% bullies, 18.6% victims, and 42.3% bully–victims). The prevalence of bullies was higher in boys (77.5%) compared with girls (58.3%). In addition, the prevalence of victims was higher in boys (67.2%) compared with girls (51%). No association was found between various categories and family type, birth order, number of friends, or grade. Bully–victim was the worst affected group as per the SDQ profile. **Conclusions:** There is a high prevalence of bullying-related involvement compared with earlier studies and a complete lack of bullying prevention policies at the school level. A simple screening strategy, using a few questions to identify bullying-related involvement, is valid and useful. Guidelines need to be devised to standardize future bullying-related research in India.

Key words: Bullying, child and adolescent health, India, rural, schools, victimization **Key messages:** Bullying involvement in the rural population has been unexplored in India. This study highlights the high prevalence of bullying involvement in this population. A simple screening strategy, using a few questions to identify bullying-related involvement, is valid and useful.

A widely used research definition of bullying is "a child is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other children."[1] It can also be

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defined as "intentional, repeated negative (unpleasant and hurtful) behavior by one or more persons directed

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against a person who has difficulty defending himself or herself."[2]

"Bullying involvement" is defined as the combined prevalence of bullies, victims, and bully–victims.^[3] Studies in Indian urban schools have reported a 53% prevalence of bullying involvement,^[3] 34% prevalence of bullies^[3] and 30–60% prevalence of victims.^[3-5] A study done in Anand/Vadodara urban schools in 2015, found 49% prevalence of bullying involvement.^[6]

In an epidemiological survey on the mental health of schoolgoing adolescents comparing urban and rural populations, it was found that prosocial behavior is significantly higher in rural adolescents.^[7] Based on this, we hypothesized that bullying exists in rural schools and that its prevalence might be lesser than in urban schools. To the best of our knowledge, there are no Indian studies on bullying in rural schools. We wished to explore the prevalence and profile of bullying involvement in the rural schools of Anand.

MATERIALS AND METHODOLOGY

A cross-sectional study was conducted in January 2016 at 12 Gujarati-medium schools from the rural areas of Anand district, Gujarat state, in Western India after approval from the institutional ethics committee (IEC). Anand district covers an area of 2941 sq. km and has 365 villages. The rural area was defined as a village/smalltown having a population less than 10,000 (viz. Borsad, Mogri, Anklay, and Gana). Based on the previous study in urban schools of Anand, [6] we assumed a prevalence of 50% of bullying-related involvement. We required a minimum sample of about 400 at a 95% confidence level and 5% acceptable error. However, to enable subgroup analyses and considering feasibility, 12 schools from four villages/small towns were selected randomly that were within a 15-km radius of our institute. Permission was obtained from the school principal before administering surveys. The survey was administered to students from classes six to ten after obtaining the written informed consent of the teacher and assent of the participant. The questionnaire was distributed and recollected from the participants through the teacher. One of the authors briefed the participants about the questionnaire prior to administration.

The survey in Gujarati language included the following:

- a. Demographic variables like age, sex, height, weight, scholastic performance, and number of friends
- b. Questions to screen and categorize the participants into bullying-related categories
- c. Questions to identify bystander behavior and reporting of bullying

- d. Peer Interaction in Primary School Questionnaire (PIPSQ)^[8]
- e. Strengths and Difficulties Questionnaire (SDQ).[9]

To screen and categorize participants into various bullying involvement categories, we followed the method used by Malhi *et al.*^[3] Four questions were used to screen participants for bullying behaviors, including:

- a. "Have you hit, kicked, pushed, or shoved another student?
- b. "Have you called other students names or made fun of them, or teased him or her in a hurtful way?"
- c. "Have you spread lies about other students?"
- d. "Have you extorted money or things from other students?"

Participants rated themselves on a three-point scale as, "never/rarely," "sometimes" (once or twice in a month), "usually/always" (several times in a month). Students who chose "sometimes" or "usually/always" on any of the above four questions were classified as bullies.

Likewise, four questions were used to screen participants for victim experiences, these were:

- a. "Have you been hit, kicked, pushed, or shoved around by another student at school?"
- b. "Have you been called names, made fun of, or teased in a hurtful way?"
- c. "Have other students told lies or spread false rumors about you and tried to make others dislike you?"
- d. "Whether your money or things have been taken away from you or damaged in some ways?"

Participants choosing "sometimes" or "usually/always" on any of the above four questions were classified as victims. Those who met the criteria for bully and victim were classified as bully–victims, and those who did not meet any of the above criteria were classified as noninvolved.

All participants who were classified as victims or bully–victims were asked additional questions related to the place of bullying, the number of children who had bullied them, whether they had reported it, and whether the school or parents had intervened.

The PIPSQ is a self-reported measure of individuals' levels of bullying behaviors and victimization experiences. It is designed for primary school children. After reading the scale items, we observed the face validity to use the questionnaire in our population. There are no other scales available to quantify such behaviors. The PIPSQ consists of 22 questions scored on a three-point scale with answers, "never," "sometimes," and "a lot." It has two subscales, viz. bullying perpetration and victim experiences. For the purpose of this study, the frequency of "never," "sometimes," and "a lot" for each question

was calculated to characterize victim experiences and bullying behaviors for the study population.

The self-reported version (11–17 years) of SDQ was used to assess the emotional, behavioral, and interpersonal difficulties experienced. SDQ has 25 questions, with five subscales, viz. emotional problem, conduct problem, hyperactivity, peer problem, and prosocial behavior. The total difficulties score is calculated by adding the scores of all subscales except prosocial behavior. Responses are scored on a three-point scale—"not true," "somewhat true," or "certainly true." Scores for the subscales were calculated as per the instructions on www.sdqinfo.com. Singh *et al.* have reported acceptable confirmatory factor analysis properties of self-reported SDQ in Indian adolescents.^[10]

Translation-back translation methodology was adopted to develop the Gujarati language adaptation of the study questionnaire. Face validity of the adaptation was accepted by the consensus of the study authors (one psychiatrist and three pediatricians). The Gujarati version of SDQ had been validated. Bullying involvement categorization into bullies, victim, bully–victims, and noninvolved was used for subgroup comparisons and calculation of prevalence. Descriptive statistics were used to portray the characteristics of various categories, and analysis of variance (ANOVA)/ Chi-square test was applied to determine the associations between various sociodemographic variables and bullying involvement categories.

RESULTS

Out of the 2,552 questionnaires distributed, 2,274 (89.1%) were returned. Proper categorization of bully/victim was possible in 2,182 (85.5%) responses,

and these were subjected to further analysis. There were 845 girls and 1,334 boys, as shown in the sociodemographic profile [Table 1].

The prevalence of bullying involvement was 70%. Of the 2,182 participants, 199 (9.1%) were categorized as bullies, 406 (18.6%) as victims, 924 (42.3%) as bully-victims, and 653 (30%) as noninvolved. Analysis of the frequency of response on each question of the PIPSQ victim subscale found that teasing, making fun, taking things, and making feel sad were most frequently endorsed as "sometimes" or "a lot" [Table 2]. Analysis of the place of bullying reported by the victims was carried out in 1,330 participants. These participants were bullied in the absence of a teacher in the classroom (18.9%, n = 252), during the recess (26.6%, n = 345), during the prayer session (7%, n = 97), just after school (21%, n = 279), and on the way to home (12.6%, n = 354).

Only 33.5% (n = 445) had shared their experiences with parents/teachers and only 22.3% (n = 297) received some intervention by parents/teachers. In addition, 45.1% (n = 985) reported that they have observed other students being bullied, and 34.3% (n = 749) had tried to help the victims.

Bullying involvement was higher in boys (77.5%) compared with girls (58.3%) (P < 0.01). Victim experiences were also higher in boys (67.2%, 16.7% + 50.5%) compared with girls (51%, 21.5% + 29.5%) [Table 1]. The bully–victim experience was higher in boys (50.5%) compared with girls (29.5%). No association was found between other sociodemographic characteristics like family type, birth order, the number of friends, or grade in school with the bully, victim, or bully–victim category.

Table 1: Sociodemographic profile of the study participants and frequency distribution according to bullying-related categories

Variable (n)	Bully n (%)	Victim n (%)	Bully and Victim n (%)	Noninvolved n (%)	P*
Gender (2179)					
Female (845)	62 (7.3)	182 (21.5)	249 (29.5)	352 (41.7)	< 0.01
Male (1334)	137 (10.3)	223 (16.7)	674 (50.5)	300 (22.5)	
Family Type (1813)					
Joint (955)	80 (8.4)	197 (20.6)	396 (41.5)	282 (29.5)	0.212
Nuclear (560)	57 (10.2)	90 (16.1)	224 (40.0)	189 (33.8)	
Separated (298)	26 (8.7)	57 (19.1)	130 (43.6)	85 (28.5)	
Birth Order (1967)					
Eldest (782)	70 (9.0)	158 (20.2)	312 (39.9)	242 (30.9)	0.222
Youngest (709)	69 (9.7)	129 (18.2)	318 (44.9)	193 (27.2)	
In Between (476)	44 (9.2)	80 (16.8)	194 (40.8)	158 (33.2)	
Friends (2182)					
Up to 6 (820)	70 (8.5)	159 (19.4)	339 (41.3)	252 (30.7)	0.677
More than 6 (1362)	129 (9.5)	247 (18.1)	585 (43.0)	401 (29.4)	

^{*}P obtained using Chi-square test

The SDQ was used for appraisal of emotional, behavior, and interpersonal difficulties experienced. ANOVA was used to compare SDQ total and subscale scores of bullying involvement categories. There was a significant difference amongst the groups on total SDQ and all subscale scores. Post hoc testing was done, keeping the noninvolved group as reference. On post hoc testing, compared with the noninvolved group, the bully–victim group was most significantly affected. Bully–victim group had the highest level of total difficulty score, emotional problems, conduct problems, hyperactivity, and peer problems. They also scored lowest in the prosocial behaviors subscale. Compared with the noninvolved group, the victim group had significantly

higher emotional and peer problems, whereas the bully group was not any different from the noninvolved group [Table 3].

DISCUSSION

The prevalence of bullying involvement among students of rural schools of Anand was 70%. This rate is slightly higher compared with the earlier study by Malhi *et al.* (53%)^[3] using a similar methodology for screening and categorization. The prevalence is also much higher than the previous Anand/Vadodara urban school study (49%), contrary to our hypothesis. The Anand/Vadodara study utilized a different method for

Table 2: Victim experiences and bullying behaviors for the study population as measured by PIPSQ

DIDCO Subscale Questions	Navan Enag (9/)	Comotimos Euros (0/)	A lot Even (0/)
PIPSQ Subscale Questions	Never Freq (%)	Sometimes Freq (%)	A lot Freq (%)
Victim experiences questions*			
1. Other students make me cry	1672 (76.6)	418 (19.2)	62 (2.8)
3. Other students take things from me that I do not want to give them	1561 (71.5)	475 (21.8)	124 (5.7)
5. Other students look at me in a mean way	1672 (76.6)	364 (16.7)	115 (5.3)
7. At recess, I play by myself	1716 (78.6)	339 (15.5)	94 (4.3)
9. Another student tells me they will hurt me	1730 (79.3)	336 (15.4)	80 (3.7)
11. I am hit or kicked by other students	1619 (74.2)	444 (20.3)	96 (4.4)
13. Other students tease me	1368 (62.7)	612 (28)	168 (7.7)
15. Other students ignore me on purpose	1656 (75.9)	363 (16.6)	123 (5.6)
17. Other students make me feel sad	1561 (71.5)	489 (22.4)	95 (4.4)
19. Other students make fun of me	1408 (64.5)	594 (27.2)	142 (6.5)
20. I want to stay home from school because students are mean to me	1844 (84.5)	222 (10.2)	84 (3.8)
22. Other students leave me out of games on purpose	1654 (75.8)	375 (17.2)	117 (5.4)
Bullying Behavior-related Scale Questions			
2. I tease other students	1426 (65.4)	649 (29.7)	84 (3.8)
4. I push or slap other students	1671 (76.6)	421 (19.3)	64 (2.9)
6. I tell other students I will hit or hurt them	1817 (83.3)	249 (11.4)	79 (3.6)
8. I say mean things about a student to make other kids laugh	1451 (66.5)	541 (24.8)	165 (7.6)
10. I make other students feel sad on purpose	1890 (86.6)	191 (8.8)	70 (3.2)
12. I call other students bad names	1703 (78)	373 (17.1)	71 (3.3)
14. I am mean to other students	1671 (76.6)	366 (16.8)	111 (5.1)
16. I hit or kick other students	1703 (78)	362 (16.6)	86 (3.9)
18. I feel bad because I am mean to other students	1473 (67.5)	452 (20.7)	222 (10.2)
21. I give other students mean or "dirty" looks	1914 (87.7)	173 (7.9)	61 (2.8)

^{*}Frequency (%) does not add up because of a few missing values. PIPSQ=Peer Interaction in Primary School Questionnaire, Freq=Frequency

Table 3: Group-wise comparative means and SDs on SDQ

SDQ Subscale*	Bully	Victim	Bully-Victim	Noninvolved	P**
Emotional Problems (<i>n</i> =2165)	3.49 (2.33) 0.686	4.23 (2.41) 0.009	4.29 (2.25) <0.001	3.72 (2.38) Reference	< 0.001
Conduct problems (n=2166)	3.22 (1.94) 0.51	3 (1.97) 0.99	3.61 (1.97) <0.001	2.97 (2.28) Reference	< 0.001
Hyperactivity (<i>n</i> =2165)	3.45 (2.34) 0.89	3.56 (2.39) 0.40	3.94 (2.19) <0.001	3.30 (2.47) Reference	< 0.001
Peer ProblemtZ s (n=2162)	3.36 (1.88) 0.99	3.70 (1.90) 0.02	3.86 (1.84) <0.001	3.32 (2.09) Reference	< 0.001
Prosocial (n=2174)	7.85 (2.12) 0.99	7.73 (2.02) 0.94	7.27 (2.13) <0.001	7.82 (2.21) Reference	< 0.001
Total Difficulty Score (n=2143)	13.53 (6.46) 0.97	14.45 (6.21) 0.04	15.71 (6.04) <0.001	13.26 (7.30) Reference	< 0.001

^{*}The second row in each cell represent post hoc P value with reference to noninvolved. **P-value obtained using analysis of variance test. SDQ: Strengths and Difficulty Questionnaire

screening and categorization of bullying involvement behaviors (the segregation into the victim, bully, and bully–victim was done based on two SDQ questions, viz. "Other people or young children pick on me or bully me" and "I fight a lot. I can make other people do what I want." [6] A study done in Brazil found that the prevalence of bullying was 17.6%. [11] These findings combined suggest that bullying involvement is a significant unaddressed problem in rural schools of Anand.

The Health Behavior in School-Aged Children (HBSC) survey 2005/06 was conducted in the sixth, eighth, and tenth-grade school children from 40 countries. It found that 10.7% of participants were bullies, 12.6% were victims, and 3.6% were bully-victims.[12] Our findings were comparable, with 9% of participants being bullies and 19% being victims. However, 42% were bully-victims. Malhi et al. had, in an urban study, found 13% bullies, 19.2% victims and 20.6% bully-victims.[3] The Anand/Vadodara urban school study found 19.3% bullies, 19.1% victims, and 10.6% bully-victims.^[6] Other studies have reported victim rates from 30% to 60%.[4,5] The high proportion of bully-victims in this sample is a stark difference compared with the previous urban studies. Variations in rates may be explained by certain rural factors like:

- a. Closeness of the children's habitat (such that everyone is often into everyone else's business
- b. Rural children are more likely to be exposed to domestic violence and abuse
- c. Rural children are more likely to be exposed to and role model substance use
- d. Lack of bullying prevention programs.

Variation in rates may also be because of differences in methodologies and threshold used for screening the study sample. The high proportion of bully-victims in our study may not be a chance finding, because the psychosocial profile of this group measured using the self-reported SDQ matches with characteristics previously reported in the literature ("hyperactive, impulsive, experiencing more peer rejection, more academic difficulties, and more stressful and harsh home environments").[13] On the SDQ profile, bully-victims were the worst affected group compared with the noninvolved, scoring the highest mean on emotional problems, conduct problems, hyperactivity, and peer problems, and the lowest mean on prosocial behavior. The high scores on the hyperactivity and peer problems subscales are self-explanatory, whereas impulsivity is usually a component of conduct problems, and stress can be hypothesized as a contributor to emotional problems.

Our study also shows that boys had higher bullying perpetration and victim experiences. Boys showing higher victim experiences are contrary to earlier research, where girls were found more likely to be victims, $^{[3,4,13]}$ but consistent with the findings of Anand/Vadodara urban school study, $^{[6]}$ In the Anand/Vadodara urban school study, it was found that students having fewer friends (P = 0.001), overweight/obese (P = 0.02), and boys (P < 0.001) were more likely to be victims. The urban study also found an association between bullying perpetration and poor academic performance. Differences, as compared with the urban study, were that the bully or victim category was not found to be associated with the number of friends or scholastic performance.

Teasing, making fun, taking things, and making feels sad were the most frequently reported experiences by victims. These findings are similar to the previous Anand/Vadodara urban school study.^[6] Earlier studies have also similarly reported calling names, threatening, making fun and physical bullying as being the most frequent.^[3-5] These findings need to be taken into consideration for the future design of local prevention policies and intervention programs.^[4]

Bullying was observed in situations where the teacher was not present or it is difficult to monitor for the teacher, for example, in recess and prayer sessions. Earlier studies had reported that most of the bullying took place in the classroom when the teacher was not present during recess, in the hallways, and playgrounds.^[3,4]

Only one-third of the victims (33.5%) shared their experience with parents/teachers, whereas, in earlier studies, it was none^[5] to minimal (3.8%).^[3] Out of those who shared their experiences with parents/teachers, about 66% received some intervention by parents/teachers. Ramya *et al.* reported that about 59% received intervention by teachers in the form of punishment for the bully.^[4] An epidemiological survey on mental health problems of adolescents in Anand district had found that difficulty in discussing friends with parents was one of the factors that increased odds of having a mental health problem.^[7]

No significant correlation was found between bullying-related categories and other socio-demographic variables [Table 1]. Nonassociation with the grade in school may indicate the stability of the victim experience (e.g. "once a victim, always a victim"). While literature [13] has reported that bullying is evident as early as in preschool, it remains unknown how early does peer bullying begins in the Indian population, and this requires further exploration.

When means of prosocial behaviors and total-difficulties on the SDQ profile for the bully group are compared with the noninvolved group, they appeared equally socially competent. This phenomenon has been described in the literature as 'socially integrated bullies' who are difficult for adults to recognize as they appear to be socially competent and well-functioning individuals.^[13]

The use of previously validated strategies for case finding, large sample size, use of SDQ, evaluation of bystander behavior, and evaluation of help-seeking were strengths of this study. Bias in reporting by the participants, noninclusion of other anthropometric measurements, lack of validation of the translated version of PIPSQ in our population, and limited generalizability are some limitations of the study.

CONCLUSIONS

Take-home messages and implications of our study are:

- a. There is high prevalence of bullying-related involvement, with high proportion of the bully-victims compared with earlier studies
- b. There is a complete lack of bullying prevention policies at school level
- c. Local profile of bullies, victims, bystanders, and parents/teacher needs to be taken into consideration for designing future intervention program
- d. A simple screening strategy, using a few questions to identify bullying involvement, is valid and useful.

Variations in the prevalence rates between studies may mainly be because of differences in methodologies and threshold used for screening the population. Thus, it is recommended that a core group of experts should define guidelines to standardize future bullying-related research in India.

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Conflicts of interest

There are no conflicts of interest.

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